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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Xaver Laufenberg

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KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,926	Applicant(s) LAUFENBERG ET AL.	
	Examiner PEDRO J. CUEVAS	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/13/06, 5/13/08</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-24, 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It must be noted that the language on lines 4-7 (*“a first area of operating characteristics in which a voltage control is performed, and at least one second area of operating characteristics in which a torque control is performed.”*) is merely “result” language which cannot be relied upon to define over the prior art. Also, the term “*operating characteristics*” in claims 16 and 17 is a relative term which renders the claim indefinite. The term “*operating characteristics*” is not defined by the claim(s), the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

3. The term “*a function of*” in claims 17, 19, 23 and 27 is a relative term which renders the claims indefinite. The term “*a function of*” is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

4. The term “*according to a linear function*” in claims 22 and 26 is a relative term which renders the claim indefinite. The term “*according to a linear function*” is not defined by the

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claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

5. The term “*according to a functional relationship*” in claims 24 and 28 is a relative term which renders the claim indefinite. The term “*according to a functional relationship*” is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

6. With regards to claims 17, 19, 22-24 and 29, if the “acts” of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. *Schrader*, 22F.3d at 294-95, 30USPQ2d at 1458-59. Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process. MPEP 2106.

7. Claims 16-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

means for obtaining the operating characteristics or the system; and

means for generating the area(s) of operating characteristics.

It should be emphasized that “apparatus claims must be structurally distinguishable from the prior art.” MPEP 2114. In *In re Danly*, 263 F. 2d 844, 847, 120 USPQ 528, 531 (CCPA 1959), it was held that apparatus claims must be distinguished from prior art in terms of structure

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rather than function. In *Hewlett-Packard Co. v Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990), the court held that: “Apparatus claims cover what a device is, not what it does” (emphases in original). To emphasize the point further, the court added: “An invention need not operate differently than the prior art to be patentable, but need only be different” (emphases in original).

8. Claims 16-24 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 16, 18, 20-21, 25 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0107351 A1 to Taniguchi et al. in view of U.S. Patent No. 5,095,703 to Okimoto et al.

Taniguchi et al. disclose the construction of an automotive alternator, comprising:

a controller (Figures 1 and 4) for controlling the generator voltage, wherein the controller performs voltage control and torque control.

However, it fails to disclose a first area of operating characteristics and at least one second area of operating characteristics.

Okimoto et al. disclose the construction of a control system for internal combustion engines, comprising a detecting section and several control sections arranged to compose a control system in which the operating characteristics present the operating areas on a coordinate plane defined by coordinate axes representing respectively engine speed and engine load (claim 8) for the purpose of generating, using and displaying Figure 4.

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It would have been obvious to one skilled in the art at the time the invention was made to use a coordinate plane operating characteristics display as disclosed by Okimoto et al. for displaying the operational characteristics of the alternator disclosed by Taniguchi et al. for the purpose of generating, using and displaying said characteristics on a coordinate plane.

13. With regards to claims 18 and 21, it would have been obvious to one having ordinary skill in the art at the time the invention was made to:

extend the first area for the voltage control a specified range from about a set point voltage; and

set at least one second area for the torque control within a voltage range defined by two voltage boundary values;

since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

14. With regards to claim 20, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide two second areas for the torque control, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

15. With regards to claim 25, Taniguchi et al. (Figure 13) in view of Okimoto et al. (Figure 4) disclose a method for controlling an operation of a generator in connection with a vehicle electrical system of a motor vehicle, comprising the steps of:

recording a voltage of the generator;

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determining whether the recorded voltage lies in a specified range from a set point voltage;

performing a voltage control with reference to the set point voltage, if the recorded voltage lies in the specified range from the set point voltage;

performing a torque control, if the recorded voltage:

a) lies outside the specified range from the set point voltage; and

b) lies within a predetermined range defined by voltage boundary values;

and

specifying a highest priority for the voltage control, if the recorded voltage lies outside the predetermined range defined by the voltage boundary values.

16. With regards to claim 29, Taniguchi et al. in view of Okimoto et al. disclose a width of a first area of operating characteristics in which a voltage control is performed and a width of at least one second area of operating characteristics in which a torque control is performed

17. With regards to claim 30, Taniguchi et al. in view of Okimoto et al. disclose a width of a first area of operating characteristics in which a voltage control is performed and a width of at least one second area of operating characteristics in which a torque control is performed.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PEDRO J. CUEVAS whose telephone number is (571)272-2021.

The examiner can normally be reached on M-F from 9:00 - 6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pedro J. Cuevas/
Examiner, Art Unit 2834
January 6, 2009